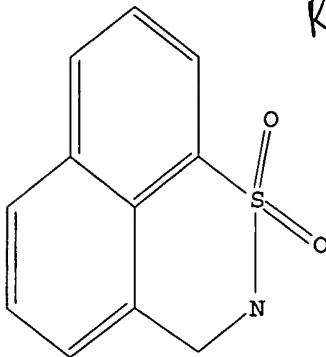


*Ring not isolated!*

*Broad Search*



Structure attributes must be viewed using STN Express query preparation.

=> s 11  
 SAMPLE SEARCH INITIATED 14:31:32 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED - 156 TO ITERATE

100.0% PROCESSED 156 ITERATIONS 0 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
 BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS: 2371 TO 3869  
 PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 sss full  
 FULL SEARCH INITIATED 14:31:41 FILE 'REGISTRY'  
 FULL SCREEN SEARCH COMPLETED - 2911 TO ITERATE

100.0% PROCESSED 2911 ITERATIONS 19 ANSWERS  
 SEARCH TIME: 00.00.01

L3 19 SEA SSS FUL L1

=> file caplus  
 COST IN U.S. DOLLARS SINCE FILE TOTAL  
 FULL ESTIMATED COST ENTRY SESSION  
 155.42 155.63

FILE 'CAPLUS' ENTERED AT 14:31:46 ON 14 DEC 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching

databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 14 Dec 2004 VOL 141 ISS 25  
FILE LAST UPDATED: 13 Dec 2004 (20041213/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13  
L4                    7 L3

=> d ibib abs hitstr tot

Own work

## L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:882062 CAPLUS

DOCUMENT NUMBER: 137:370098

TITLE: Preparation of naphthothiazine dioxides as positive allosteric AMPA receptor modulators (PAARM)

INVENTOR(S): Winter, Karin; Weiser, Thomas; Ceci, Angelo; Klinger, Klaus

PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

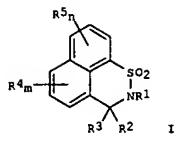
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10123952	A1	20021121	DE 2001-10123952	20010517
US 2003100552	A1	20030529	US 2002-141208	20020508
WO 200200411	A1	20021219	WO 2002-EP5338	20020515
W: AE, AG, AL, AM, AR, AU, AZ, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GE, GH, GR, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EE 200300566	A	20040216	EE 2003-566	20020515
EP 1404340	A1	20040407	EP 2002-750931	20020515
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TZ				
BR 2002003796	A	20040601	BR 2002-9796	20020515
JP 200452980	T2	20040530	JP 2003-503232	20020515
US 2004116412	A1	20040617	US 2003-6599374	20031031
US 2004122003	A1	20040624	US 2003-6599168	20031031
NO 2003005088	A	20031114	NO 2003-5088	20031114
PRIORITY APPLN. INFO.:			DE 2001-10123952	A 20010517
			US 2001-303292P	P 20010706
			US 2002-141208	B1 20020508
			WO 2002-EP5338	W 20020515

OTHER SOURCE(S): MARPAT 137:37008

GI

## L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



AB Title compds. [I; R1 = H, (halo-substituted) alkyl, SO2H, sulfonylalkyl, carbonylalkyl, etc.; R2, R3 = H, (halo-substituted) alkyl, NO2, SO2H, sulfonylalkyl, sulfinylalkyl, carbonylalkyl, etc., or R1R2 = alkylene, R4, R5 = (halo-substituted) alkyl, phenylalkyl, halo, cyano, NO2, SO2H, etc.; n, m = 0-3], were prepared. Thus, 2.21 g N-methyl-1-naphthalenesulfonamide was dissolved in MeSO2OH at 35° followed by treatment with trioxane in CF3CO2H and stirring for 2 h at room temperature to give 2.20 g

2-methoxy-2,3-dihydro-1,1-dioxonaphtho[1,8-de][1,2-thiazine]. The latter was tested at 0.3-300  $\mu$ mol against cells expressing functional AMPA receptors and showed good AMPA receptor agonist activity.

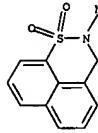
IT 475466-81-0P 475466-82-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of naphthothiazine dioxides as pos. allosteric AMPA receptor modulators (PAARM))

RN 475466-81-0 CAPLUS

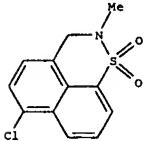
CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-2-methyl-, 1,1-dioxide (9CI) (CA INDEX NAME)



RN 475466-82-1 CAPLUS

CN Naphtho[1,8-de]-1,2-thiazine, 6-chloro-2,3-dihydro-2-methyl-, 1,1-dioxide (9CI) (CA INDEX NAME)

## L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



## L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:819372 CAPLUS

DOCUMENT NUMBER: 132:49830

TITLE: Preparation of naphtho[1,8-de]thiavin-2-yl methyl carbapenem antibiotics

INVENTOR(S): Ratcliffe, Ronald W.; Dykstra, Kevin D.; Blizzard, Timothy A.

PATENT ASSIGNEE(S): Merck &amp; Co., Inc., USA

SOURCE: PCT Int. Appl., 61 pp.

CODEN: PIXKD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967242	A1	19991229	WO 1999-US14235	19990623
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TR, RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2335510	AA	19991229	CA 1999-2335510	19990623
AU 9947118	A1	20000110	AU 1999-47118	19990623
EP 1090000	A1	20010411	EP 1999-930616	19990623
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
US 6346526	B1	20020212	US 1999-338646	19990623
JP 2002518498	T2	20020625	JP 2000-555895	19990623
PRIORITY APPLN. INFO.:			US 1998-90613P	P 19980625
			WO 1999-US14235	W 19990623

OTHER SOURCE(S): MARPAT 132:49830

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Carbapenem derivs. of formula I [P = H, (substituted) OH, F; R1 = H, Me; M = H, anion, ester group; X = CH2, CO; R = (substituted) Ph, alkenyl, etc.]; n = 0-4] are prepared as antibacterial agents (no data). Thus, II is prepared by adding 1,1-dioxo-2,3-dihydropaphtho[1,8-de]thiavin-3-one to III, then deblocking.

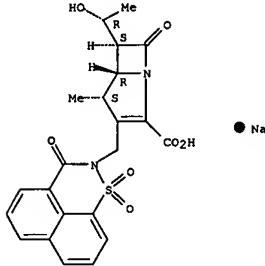
IT 225531-30-6P 225531-31-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses); (preparation of naphtho[1,8-de]thiavin-2-yl Me carbapenem antibiotics)

RN 225531-30-6 CAPLUS

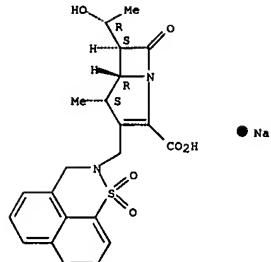
L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-6-((1R)-1-hydroxyethyl)-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)-(9CI) (CA INDEX NAME)

### Absolute stereochemistry.

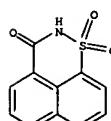


RN 225531-31-7 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1*S*)-1-dioxido-  
 phthalpo[1,8-de]-1,2-thiazin-2(3*H*-yl)methyl]-6-[(1*R*)-1-  
 hydroxyethyl]-4-methyl-7-oxo, monosodium salt, (4*S*,5*R*,6*S*)- (5CI) (CA  
 INDEX NAME)

### Absolute stereochemistry.

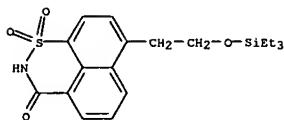


IT 29083-20-3 252908-64-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of naphtho[1,8-de]thiazin-2-yl Me carbapenem  
antibacterials)  
RN 29083-20-3 CAPLUS  
CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX  
NAME)

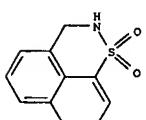


RN 252908-64-8 CAPLUS  
CN Naphthal[1,8-de]-1,2-thiazin-3(2H)-one, 7-[2-[(triethylsilyl)oxy]ethyl]-1,1-dioxide, (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



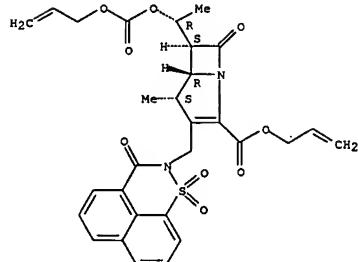
IT 225531-06-6P 225531-17-9P 225531-18-0P  
 2252008-68-1P 2252008-66-0P 2252008-67-1P  
 2252008-69-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of naphtho[1,8-de]thiazin-2-yl Me carbapenem  
 antibacterials)  
 RN 225531-06-6 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-, 1,1-dioxide (9CI) (CA INDEX  
 NAME)



RN 225531-17-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl)carbonyl]oxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)-  
 (9CI)

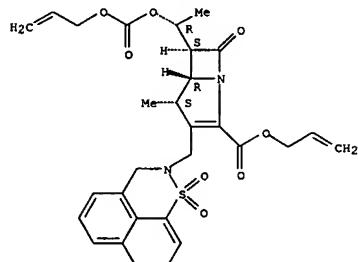
(CA INDEX NAME)

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 225531-18-0 CAPLUS  
 CN 1-acetylacyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxidinonaphtho[1,8-d]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl)oxy]carbonyl]oxy]ethyl-, 2-propenyl ester, (4S,5R,6S)-  
 (9CI) (CA INDEX NAME)

### Absolute stereochemistry

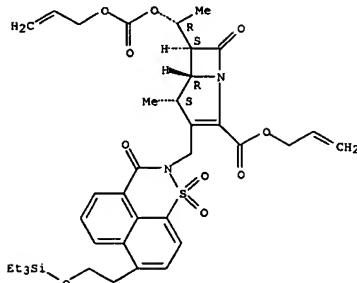


RN 252908-65-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxo-7-  
 [2-(triethylsilyl)oxy]ethyl)naphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-  
 4-methyl-7-oxo-6-[(1R)-1-[(2-propenylcarbonyloxy)ethoxy]ethyl]-  
 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

(Continued)

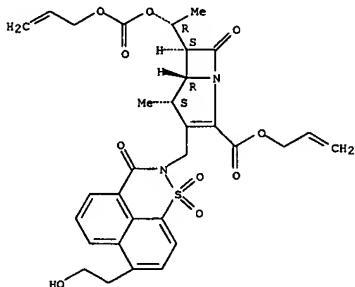
Absolute stereochemistry.



RN 252908-66-0 CAPLUS

CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(7-(2-hydroxyethyl)-1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl oxy) carbonyl] oxy] ethyl-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

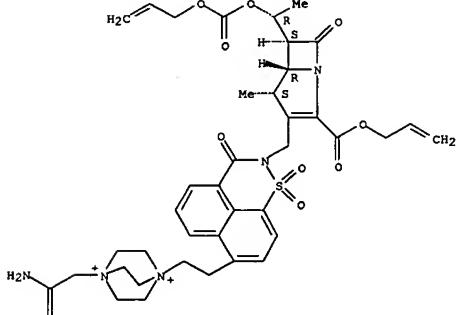
Absolute stereochemistry.



L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

(Continued)

PAGE 1-A



PAGE 2-A

CM 2

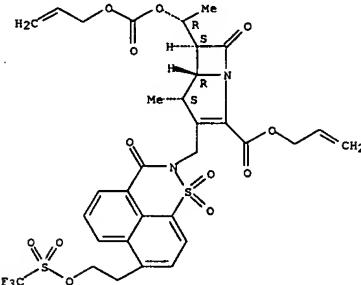
CRN 37181-39-8  
CMF C F3 O3 S

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

RN 252908-67-1 CAPLUS  
CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxo-7-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl oxy) carbonyl] oxy] ethyl-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252908-69-3 CAPLUS

CN 1,4-Diazoniabicyclo[2.2.2]octane, 1-(2-amino-2-oxoethyl)-4-[2-(2,3-dihydro-2-[(4S,5R,6S)-4-methyl-7-oxo-2-(2-propenyl oxy) carbonyl] oxy] ethyl]-6-[(1R)-1-[(2-propenyl oxy) carbonyl] oxy] ethyl-1-azabicyclo[3.2.0]hept-2-en-3-yl)methyl-, 1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-7-yl]ethyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 252908-68-2  
CMF C39 H47 N5 O10 S

Absolute stereochemistry.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:193190 CAPLUS

DOCUMENT NUMBER: 131:5125

TITLE: Synthesis and activity of 2-(sulfonamido)methylcarbapenems: discovery of a novel, anti-MRSA 1,8-naphthosultam pharmacophore

AUTHOR(S): Wilkening, R. R.; Ratcliffe, R. W.; Wildonger, K. J.; Cama, L. D.; Dykstra, K. D.; DiNinno, F. P.; Blizzard,

T. A.; Hammond, M. L.; Heck, J. V.; Dorso, K. L.; St. Rose, E.; Kohler, J.; Hammond, G. G.

CORPORATE SOURCE: Department of Medicinal Chemistry, Merck Research Laboratories, Merck and Co., Inc., Rahway, NJ, 07065-0900, USA

SOURCE: Bioorganic &amp; Medicinal Chemistry Letters (1999), 9(5), 673-678

CODEN: BMCLB8; ISSN: 0960-894X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 18-M<sub>2</sub> carbapenems substituted at the 2-position with lipophilic, acyclic and cyclic (sulfonamido)methyl groups were prepared and evaluated for activity against resistant gram-pos. bacteria. The 1,8-naphthosultam group emerged as a novel, PBP2a-binding, anti-MRSA pharmacophore worthy of further exploration.

IT 225531-30-6P 225531-31-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

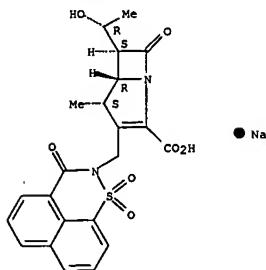
(preparation and antibacterial activity of 2-(sulfonamido)methylcarbapenems)

RN 225531-30-6 CAPLUS

CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

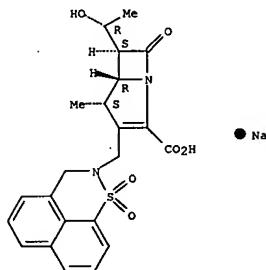
Absolute stereochemistry.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



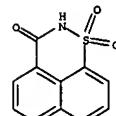
RN 225531-31-7 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxidonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

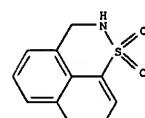


IT 29083-20-3 225531-06-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and antibacterial activity of  
 2-(sulfonamido)methylcarbapenems)

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (9CI, 9CI) (CA INDEX NAME)



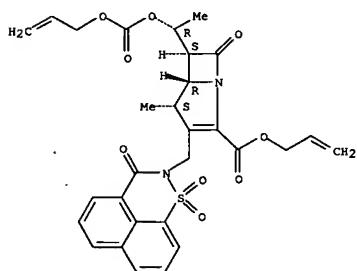
RN 225531-06-6 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT 225531-17-9P 225531-18-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antibacterial activity of  
 2-(sulfonamido)methylcarbapenems)  
 RN 225531-17-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

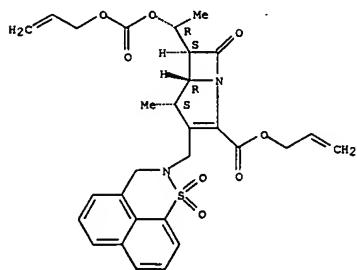
Absolute stereochemistry.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 225531-18-0 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxidonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyl)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

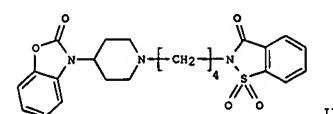
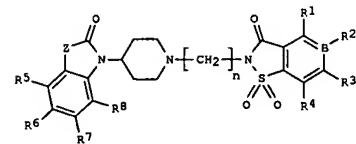


REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1998:392146 CAPLUS  
 DOCUMENT NUMBER: 129:54361  
 TITLE: Preparation of benzisothiazolones and analogs as α1C-adrenergic receptor antagonists  
 INVENTOR(S): Huff, Joel R.; Lee, Hee-yoon; Nerenberg, Jennie B.; Thompson, Wayne J.; Bell, Ian M.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 57 pp., Cont.-in-part of U. S. Ser. No. 229,276, abandoned.  
 DOCUMENT TYPE: CODEN: USXXAM  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: English  
 PATENT INFORMATION:

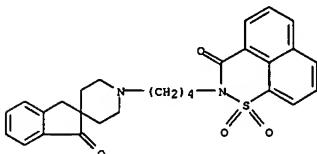
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5760054	A	19980602	US 1996-722001	19961001
WO 9528397	A1	19951026	WO 1995-US4590	19950413
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 1994-229276	B2 19940413
			WO 1995-US4590	W 19950413

OTHER SOURCE(S): MARPAT 129:54361  
 GI



L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 AB The invention relates to the claimed title compds. I [n = 3-5; B = C or N; R1, R2, R3, R4 = H, halo, NO<sub>2</sub>, NH<sub>2</sub>, (un)substituted alkyl, alkoxy, aryl, heteroaryl, etc.; R5, R6, R7, R8 = H, alkyl, alkenyl, alkoxy; Z = O, S, CH<sub>2</sub>, NH, NMe and analogs. Also disclosed are the synthesis and use of the compds. as selective  $\alpha$ 1C-adrenergic receptor antagonists. The primary application of the compds. is in the treatment of benign prostatic hyper trophy (BPH). The compds. selectively relax smooth muscle tissue enriched in the  $\alpha$ 1C receptor subtype without inducing orthostatic hypotension. The compds. provide acute relief of BPH by permitting less hindered urine flow. I and analogs are also useful in combination with human 5 $\alpha$ -reductase inhibitors, providing both acute and chronic relief from the effects of BPH. Approx. 130 specific invention compds. are disclosed. The cloning and use of a cDNA for a human  $\alpha$ 1C adrenocceptor in an *in vitro* assay is described. For instance, alkylation of 1-(4-piperidinyl)-1,3-benzoxazolin-2-one-HCl (prepared in 4 steps) with 2-(4-bromobutyl)-1,1-dioxido-1,2-benzisothiazol-3(2H)-one in the presence of (i-Pr)2NEt in DMF gave 40% title compound II. Selected compds. showed nanomolar or subnanomolar affinity for human  $\alpha$ 1C receptor subtype while showing 30-fold lower affinity for human  $\alpha$ 1A and  $\alpha$ 1B subtypes (no data).

IT 173842-47-2  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of benzisothiazolones and analogs as  $\alpha$ 1C-adrenergic antagonists)  
 RN 173842-47-2 CAPLUS  
 CN Spiro[2H-indene-2,4'-piperidin]-1(3H)-one, 1'-(4-(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)butyl)- (9CI) (CA INDEX NAME)



IT 29083-20-3  
 RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of benzisothiazolones and analogs as  $\alpha$ 1C-adrenergic antagonists)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:998362 CAPLUS

DOCUMENT NUMBER: 124:176079

TITLE: Preparation of heterocycles as  $\alpha$ 1C adrenergic receptor antagonists

INVENTOR(S): Huff, Joel R.; Lee, Hee-Yoon; Nerenberg, Jennie B.; Thompson, Wayne J.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: PCT Int. Appl., 209 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

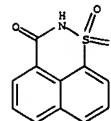
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

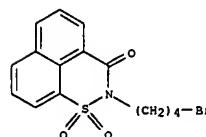
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9528397	A1	19951026	WO 1995-US4590	19950413
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2187767	AA	19951026	CA 1995-2187767	19950413
AU 9523566	A1	19951110	AU 1995-23566	19950413
AU 688498	B2	19980312		
EP 755392	A1	19970129	EP 1995-917565	19950413
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 09512016	T2	19971202	JP 1995-527097	19950413
US 5760054	A	19980602	US 1996-722001	19961001
PRIORITY APPLN. INFO.:			US 1994-229276	A 19940414
			WO 1995-US4590	W 19950413

OTHER SOURCE(S): MARPAT 124:176079  
 GI

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

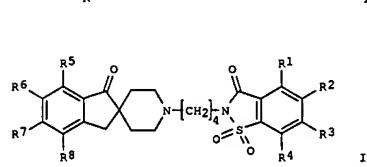
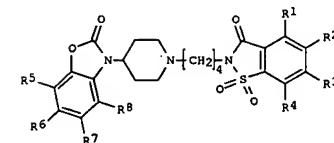


IT 173842-52-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of benzisothiazolones and analogs as  $\alpha$ 1C-adrenergic antagonists)  
 RN 173842-52-9 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 2-(4-bromobutyl)-, 1,1-dioxide (8CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

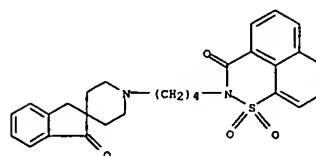


AB Title compds. such as I (R1, R2, R3, R4 = H, NO<sub>2</sub>, NH<sub>2</sub>, etc.; R5, R6, R7, R8 = H, alkyl, alkenyl, alkoxy, etc.) and II, effective testosterone reductase inhibitors useful in treatment of benign prostatic hyperplasia, were prepared Alkylation of 1-(4-piperidinyl)-3-benzoxazolin-2-one-HCl with

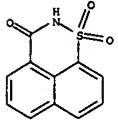
2-(4-bromobutyl)-1,1-dioxido-2-benzothiazol-3(2H)-one in the presence of (i-Pr)2NEt in DMF afforded 40% I (R1-R8 = H). Title compds. are effective

at 0.001 mg/kg - 7 mg/kg per day in humans.

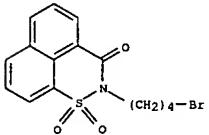
IT 173842-47-2  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of heterocycles as  $\alpha$ 1C adrenergic receptor antagonists)  
 RN 173842-47-2 CAPLUS  
 CN Spiro[2H-indene-2,4'-piperidin]-1(3H)-one, 1'-(4-(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)butyl)- (9CI) (CA INDEX NAME)



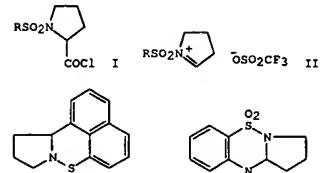
L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 IT 29083-20-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of heterocycles as  $\alpha$ lc adrenergic receptor antagonists)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)



IT 173842-52-9  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of heterocycles as  $\alpha$ lc adrenergic receptor antagonists)  
 RN 173842-52-9 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 2-(4-bromobutyl)-, 1,1-dioxide (8CI) (CA INDEX NAME)

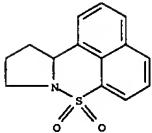


L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1980:110942 CAPLUS  
 DOCUMENT NUMBER: 92:110942  
 TITLE: New synthesis of sultams via readily generated iminium ions  
 AUTHOR(S): Adesogan, E. Kayode; Alo, Babajide I.  
 CORPORATE SOURCE: Dep. Chem., Univ. Ibadan, Ibadan, Nigeria  
 SOURCE: Journal of the Chemical Society, Chemical Communications (1979), (16), 673-4  
 DOCUMENT TYPE: CODEN: JCCCAT; ISSN: 0022-4936  
 LANGUAGE: Journal  
 OTHER SOURCE(S): English  
 GI CASREACT 92:110942



AB N-Arylsulfonylprolyl chlorides I (R = Ph, p-MeC6H4, o-O2NC6H4,  $\alpha$ -naphthyl) reacted spontaneously with F3CSO3Ag at room temperature to give the iminium salts II. II (R =  $\alpha$ -naphthyl, o-O2NC6H4) were readily converted into the sultams III and IV, resp., III by refluxing II (R =  $\alpha$ -naphthyl) in CCl4 and IV by treatment of II (R = o-O2NC6H4) with aqueous NH3 followed by cyclization with iron in AcOH.  
 IT 72923-03-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 72923-03-6 CAPLUS  
 CN Naphtho[1,8-de]pyrrolo[1,2-b][1,2]thiazine, 9,10,11,11a-tetrahydro-, 7,7-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1971:463679 CAPLUS  
 DOCUMENT NUMBER: 75:63679  
 TITLE: Preparation of substituted 1,2-benzoisothiazolin-3-one 1,1-dioxides ( $\alpha$ -benzoic sulfimides)  
 AUTHOR(S): Lombardino, Joseph G.  
 CORPORATE SOURCE: Med. Res. Lab., Pfizer Co., Inc., Groton, CT, USA  
 SOURCE: Journal of Organic Chemistry (1971), 36(13), 1843-5  
 DOCUMENT TYPE: CODEN: JOCZAH; ISSN: 0022-3263  
 LANGUAGE: Journal  
 OTHER SOURCE(S): English  
 GI CASREACT 75:63679  
 AB For diagram(s), see printed CA Issue.  
 N-(tert-Butyl)benzenesulfonamides (I) are converted to 1,2-benzoisothiazolin-3-one 1,1-di-oxides (II) by lithiation (BuLi), carbonation, and cyclization (polyphosphoric acid). N-Benzyl analogs of the I are not debenzylated.  
 2,3-Dihydro-3-oxonaphtho[1,8-de][1,2]thiazine 1,1-dioxide (III) is prepared by the same series of reactions from 1-C10H7SO2NHMe3.  
 IT 29083-20-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)

